Customer No.: 31561
Application No.: 10/709,924
Docket NO.: 13366-US-PA

AMENDMENT

Please amend the application as indicated hereafter.

In the Claims :

1. (original) A high-voltage metal-oxide-semiconductor (HV-MOS) device, comprising:

a substrate;

a gate dielectric layer on the substrate;

a gate on the gate dielectric layer;

a channel region in the substrate under the gate dielectric layer;

two doped regions as a source and a drain in the substrate beside the gate;

a field isolation layer between the gate and at least one of the doped regions;

a drift region in the substrate under the field isolation layer, connecting with the channel region and the at least one doped region; and

a modifying doped region in the substrate at periphery of the at least one doped region.

2. (original) The HV-MOS device of claim 1, wherein the field isolation layer is between the gate and the two doped regions, and the modifying doped region is in the substrate at the peripheries of the two doped regions.

3. (original) The HV-MOS device of claim 1, wherein the drift region and the modifying doped region together completely surround the at least one doped region.

4. (original) The HV-MOS device of claim 1, wherein the field isolation layer comprises a field oxide (FOX) layer.

5. (original) The HV-MOS device of claim 1, wherein each doped region comprises a heavily doped contact region and a lightly doped grade region under the contact region.

6. (original) The HV-MOS device of claim 1, wherein a doping concentration of the drift region and the modifying doped region ranges from $5\times10^{15}/cm^3$ to $5\times10^{17}/cm^3$.

Claims 7-14 (canceled).